

# Daylight and Sunlight Study (Neighbouring Properties) 14 Solent Road, London, NW6 1TU

25 September 2024





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#### 1 EXECUTIVE SUMMARY

#### 1.1 Overview

- 1.1.1 Smith Marston Building Surveyors have been commissioned by Mr G Wiles to undertake a daylight and sunlight study of the proposed development at 14 Solent Road, London, NW6 1TU.
- 1.1.2 The study is based on the various numerical tests laid down in the Building Research Establishment (BRE) guide 'Site Layout Planning for Daylight and Sunlight: a guide to good practice, 3<sup>rd</sup> Edition' by P J Littlefair 2022.
- 1.1.3 The aim of the study is to assess the impact of the development on the light receivable by the neighbouring residential properties at 12 and 16 Solent Road.
- 1.1.4 The images in Appendix 1 identify the windows we have assessed. Appendix 2 gives the numerical results of the various daylight and sunlight tests and No Sky Line contours illustrating daylight distribution. Overshadowing to gardens and opens spaces data and contour drawings are provided in Appendix 3. Appendix 4 has alternative results if using mitigating methodology from the BRE Guide.
- 1.1.5 In summary, the numerical results in this assessment demonstrate that the proposed development will have a low impact on the light receivable by its neighbouring properties.
- 1.1.6 All relevant windows at Number 16 pass the BRE daylight and sunlight tests. The sunlight to garden test marginally falls short of the BRE target, in that the garden to Number 16 will experience a reduction in sunlight hours to the relevant parts of the garden of 24%, slightly more than the 20% at which the BRE considers reduction in sunlight may be noticeable.
- 1.1.7 At 12 Solent Road, the only relevant window which does not pass the BRE numerical tests is Window 6. This window serves the rear reception room and is situated adjacent to the projecting wing/offshoot of the main house that accommodates the kitchen/dining area. The BRE guide explains that one way to demonstrate that the projecting wing is a contributing factor in loss of light is to carry out an additional calculation without this existing obstruction in place. In this instance, Window 6

passes the test using the additional calculation with the existing projecting wing obstruction removed. This demonstrates that the development is a modest obstruction and it is the self-obstruction of the projecting wing, rather than the size of the new obstruction, which contributes to an unavoidable reduction in daylight.

1.1.8 Overall, therefore, the proposed development has a low impact on the daylight and sunlight amenity of the neighbouring properties.

#### 2 INFORMATION SOURCES

#### 2.1 Drawings

2.1.1 This report is based on the following drawings:

#### Fabian Architects and Make Architects & Interior Studio

#### 2.2 Daylight Distribution Room Layout Information

2.2.1 The daylight distribution test has been applied based on the following room layout information:

#### Online Local Authority planning records

16 Solent Road:

D01	Existing Ground Floor Plan	Rev -
D02	Existing First Floor Plan	Rev -
D04	Proposed Loft Plan	Rev -
D06	Proposed Roof Plan	Rev -

#### www.rightmove.co.uk

12 Solent Road:

Floor Plans Rev -

#### 3 METHODOLOGY OF THE STUDY

#### 3.1 Local Planning Policy

- 3.1.1 We understand that the Local Authority take the conventional approach of considering daylight and sunlight amenity with reference to the various numerical tests laid down in the Building Research Establishment (BRE) guide 'Site Layout Planning for Daylight and Sunlight: a guide to good practice, by P J Littlefair 2011. This report is based on the 3<sup>rd</sup> edition of the BRE guide which was published on 8 June 2022.
- 3.1.2 The standards set out in the BRE guide are intended to be used flexibly. The BRE guide states:
- 3.1.3 "The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly, since natural lighting is only one of many factors in site layout design."
- 3.1.4 In reference to applying different numerical target values in different locations, the BRE guide states:
- 3.1.5 "These values are purely advisory and different targets may be used based on the special requirements of the proposed development or its location."

#### 3.2 National Planning Policy Framework

- 3.2.1 The BRE numerical guidelines should be considered in the context of the revised National Planning Policy Framework (NPPF), which stipulates that local planning authorities should take a flexible approach to daylight and sunlight to ensure the efficient use of land. The NPPF states:
- 3.2.2 "Local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in this Framework. In this context, when considering applications for housing, authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight, where they

would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards)."

#### 3.3 National Planning Practice Guidance

3.3.1 The BRE numerical guidelines should also be considered in the context of the National Planning Practice Guidance (NPPG). The NPPG states that developments should maintain acceptable living standards. It goes on to explain that what this means in practice is that appropriate levels of sunlight and daylight, will depend to some extent on the context for the development. This is consistent with the BRE guide which as noted in paragraphs 3.1.4 to 3.1.5 above, states that site location is a relevant factor when setting sunlight and daylight targets.

#### 3.4 Daylight to Windows

- 3.4.1 Diffuse daylight is the light received from the sun which has been diffused through the sky. Even on a cloudy day, when the sun is not visible, a room will continue to be lit with light from the sky. This is diffuse daylight.
- 3.4.2 Diffuse daylight calculations should be undertaken to all rooms within domestic properties, where daylight is required, including living rooms, kitchens and bedrooms. The BRE guide states that windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed. These room types are non-habitable and do not have a requirement for daylight.
- 3.4.3 The BRE guide contains two tests which measure diffuse daylight:

#### **Test 1 Vertical Sky Component**

- 3.4.4 The Vertical Sky Component is a measure of available skylight at a given point on a vertical plane. Diffuse daylight may be adversely affected if after a development the Vertical Sky Component is both less than 27% and less than 0.8 times its former value.
- 3.4.5 The BRE guide states that the total amount of skylight can be calculated by finding the Vertical Sky Component at the centre of each main window. However, the guide states that if there would be a significant loss of light to the main window but the room also has one or more smaller windows, an overall Vertical Sky Component may be

derived by weighting each Vertical Sky Component element in accordance with the proportion of the total glazing area represented by its window.

#### **Test 2 Daylight Distribution**

- 3.4.6 The distribution of daylight within a room can be calculated by plotting the 'no sky line'. The no sky line is a line which separates areas of the working plane that do and do not have a direct view of the sky. Daylight may be adversely affected if, after the development, the area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value.
- 3.4.7 The BRE guide states that both the total amount of skylight (Vertical Sky Component) and its distribution within the building (Daylight Distribution) are important. The BRE guide states that the daylight distribution calculation can only be carried out where room layouts are known. It states that using estimated room layouts is likely to give inaccurate results and is not recommended. Therefore, we don't endorse the practice of applying the test based on assumed room layouts. However, we can provide additional daylight distribution data upon request by the local authority, if neighbouring room layout information is confirmed.

#### 3.5 Sunlight Availability to Windows

- 3.5.1 The BRE sunlight tests should be applied to all main living rooms and conservatories which have a window which faces within 90 degrees of due south. The BRE guide states that kitchens and bedrooms are less important, although care should be taken not to block too much sunlight. It also states that normally loss of sunlight need not be analysed to kitchens and bedrooms, except for bedrooms which also comprise a living space. The tests should also be applied to non-domestic buildings where there is a particular requirement for sunlight.
- 3.5.2 The test is intended to be applied to main windows which face within 90 degrees of due south. However, the BRE guide explains that if the main window faces within 90 degrees due north, but a secondary window faces within 90 degrees due south, sunlight to the secondary window should be checked. For completeness, we have tested all windows which face within 90 degrees of due south. The BRE guide states that sunlight availability may be adversely affected if the centre of the window:

- receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 September and 21 March and
- receives less than 0.8 times its former sunlight hours during either period and
- has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.

#### 3.6 Overshadowing to Gardens and Open Spaces

- 3.6.1 The availability of sunlight should be checked for all open spaces where sunlight is required. This would normally include:
  - Gardens, usually the main back garden of a house
  - · Parks and playing fields
  - Children's playgrounds
  - Outdoor swimming pools and paddling pools
  - Sitting out areas, such as those between non-domestic buildings and in public squares
  - Focal points for views such as a group of monuments or fountains.
- 3.6.2 One way to consider overshadowing is by preparing shadow plots. However, the BRE guide states that it must be borne in mind that nearly all structures will create areas of new shadow, and some degree of transient overshadowing is to be expected. Therefore, shadow plots are of limited use as interpretation of the plots is subjective. Shadow plots have not been undertaken as part of this study.
- 3.6.3 The BRE guide also contains an objective overshadowing test which has been adopted for the purpose of this study. This guide recommends that at least 50% of the area of each amenity space listed above should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of

sunlight on 21 March is less than 0.8 times its former value, then the loss of light is likely to be noticeable.

#### 4 RESULTS OF THE STUDY

#### 4.1 Windows & Amenity Areas Considered

- 4.1.1 The aim of the study is to assess the impact of the development on the light receivable by the neighbouring residential properties at 12 and 16 Solent Road, London, NW6 1TU.
- 4.1.2 Appendix 1 identify the windows we have assessed. Appendix 2 gives the numerical results of the various daylight and sunlight tests, and No Sky Line contours illustrating daylight distribution. Overshadowing to gardens and opens spaces data and contour drawings are provided in Appendix 3. Appendix 4 has alternative results if using mitigating methodology from the BRE Guide.

#### 4.2 Daylight to Windows

#### Vertical Sky Component

- 4.2.1 All relevant windows at 16 Solent Road with a requirement for daylight pass the Vertical Sky Component test.
- 4.2.2 All relevant window except one at 12 Solent Road with a requirement for daylight pass the Vertical Sky Component test. Only the rear reception room window, Window 6, does not meet the <u>standard</u> BRE criteria. This window will experience a reduction in its VSC level of 31%, which is more than the 20% threshold at which the Building Research Establishment (BRE) consider the reduction is likely to be significant.
- 4.2.3 <u>However</u>, this window serves the rear reception room which is situated adjacent to the projecting wing/offshoot of the main house that accommodates the kitchen/dining area. Naturally, the presence of the rear kitchen offshoot/wing presents a mass that contributes to the self-obstruction of light to the Window 6.
- 4.2.4 The BRE guide explains that one way to demonstrate that the projecting wing is a contributing factor in loss of light is to carry out an additional calculation without this existing obstruction in place. In this instance, Window 6 passes the test using the additional calculation with the existing projecting wing obstruction removed (See Appendix 4). Without the projecting wing, Window 6 would only experience an 11%

reduction in its VSC value, thus, less than the 20% threshold in the BRE Guide, and would therefore pass the VSC test. This demonstrates that the development is a modest obstruction and it is the self-obstruction of the projecting wing, rather than the size of the new obstruction, which contributes to an unavoidable reduction in daylight.

4.2.5 Number 12 Solent Road also has windows (Window 2 to 5) in the side elevation of the rear projecting wing, but, these are smaller and therefore 'secondary' windows to this room; the main source of light being the opening on the rear elevation (Window 1). As such, secondary windows can be disregarded, and Window 1 will remain unaffected by the proposed works.

#### **Daylight Distribution**

4.2.6 We have undertaken the Daylight Distribution test where room layouts are known. All rooms with a requirement for daylight pass the daylight distribution test.

#### 4.3 Sunlight to Windows

4.3.1 All windows that face within 90 degrees of due south have been tested for direct sunlight. All windows with a requirement for sunlight pass both the total annual sunlight hours test and the winter sunlight hours test. The proposed development therefore satisfies the BRE direct sunlight to windows requirements.

#### 4.4 Overshadowing to Gardens and Open Spaces

- 4.4.1 The garden to Number 12 meets the BRE recommendations for sunlight, as no loss of sunlight will be experienced to the garden because of proposed extension.
- 4.4.2 The garden to Number 16 will experience a 24% reduction in its sunlight, marginally more than the 20% value in the BRE Guide, whereby the loss is considered likely to be noticeable.

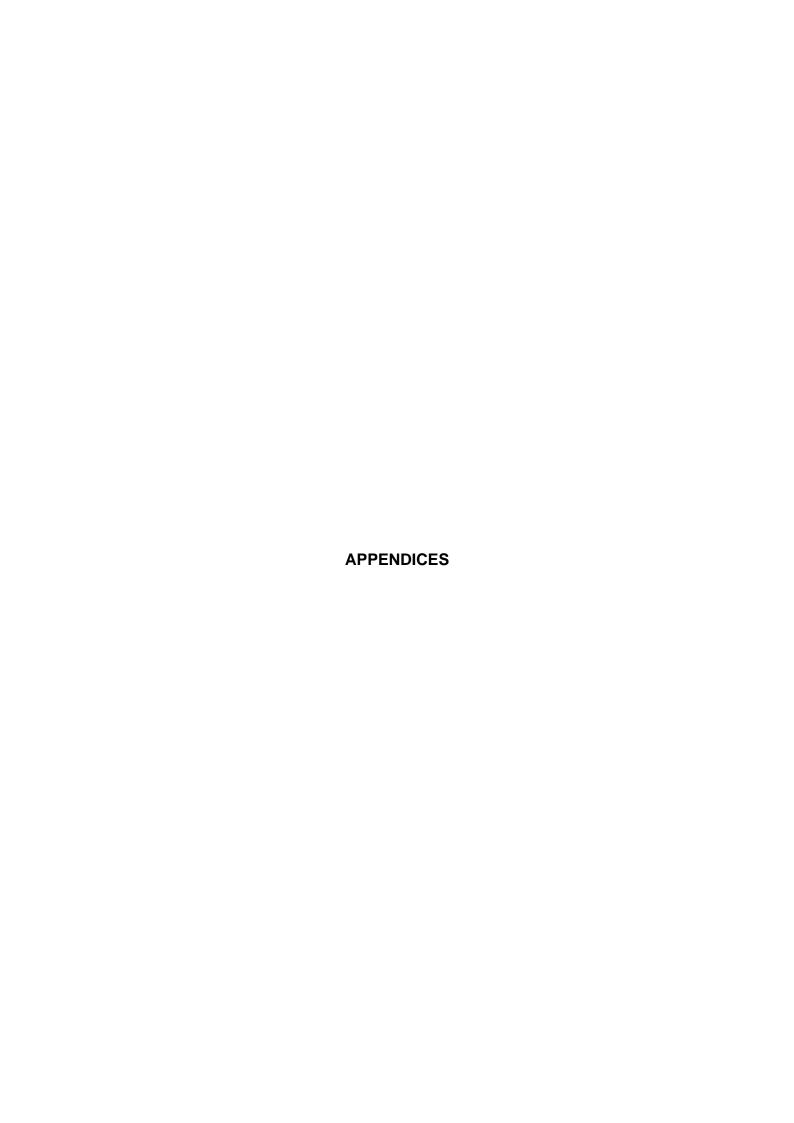
#### 4.5 Conclusion

4.5.1 In summary, the numerical results in this study demonstrate that the proposed development will have a low impact on the light receivable by its neighbouring property windows. The garden to Number 16 will experience 24% reduction in sunlight hours to the rear garden, slightly more than the 20% threshold in the BRE Guide.

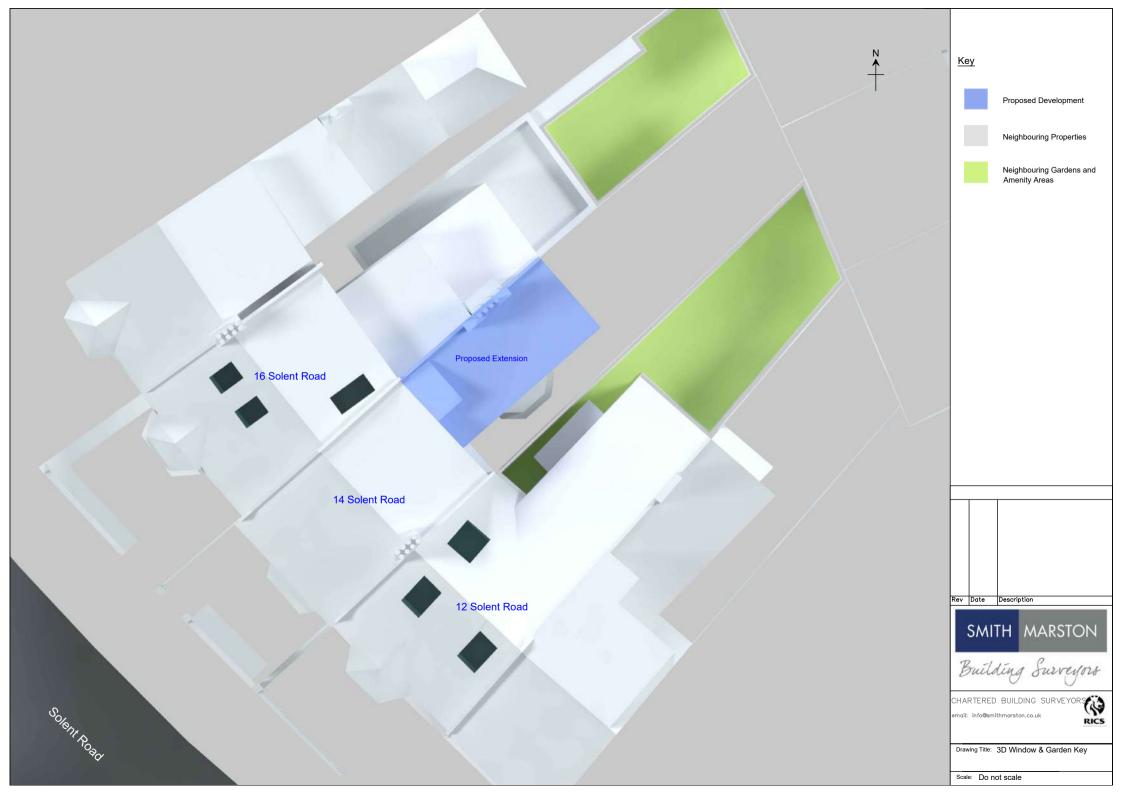
#### 5 CLARIFICATIONS

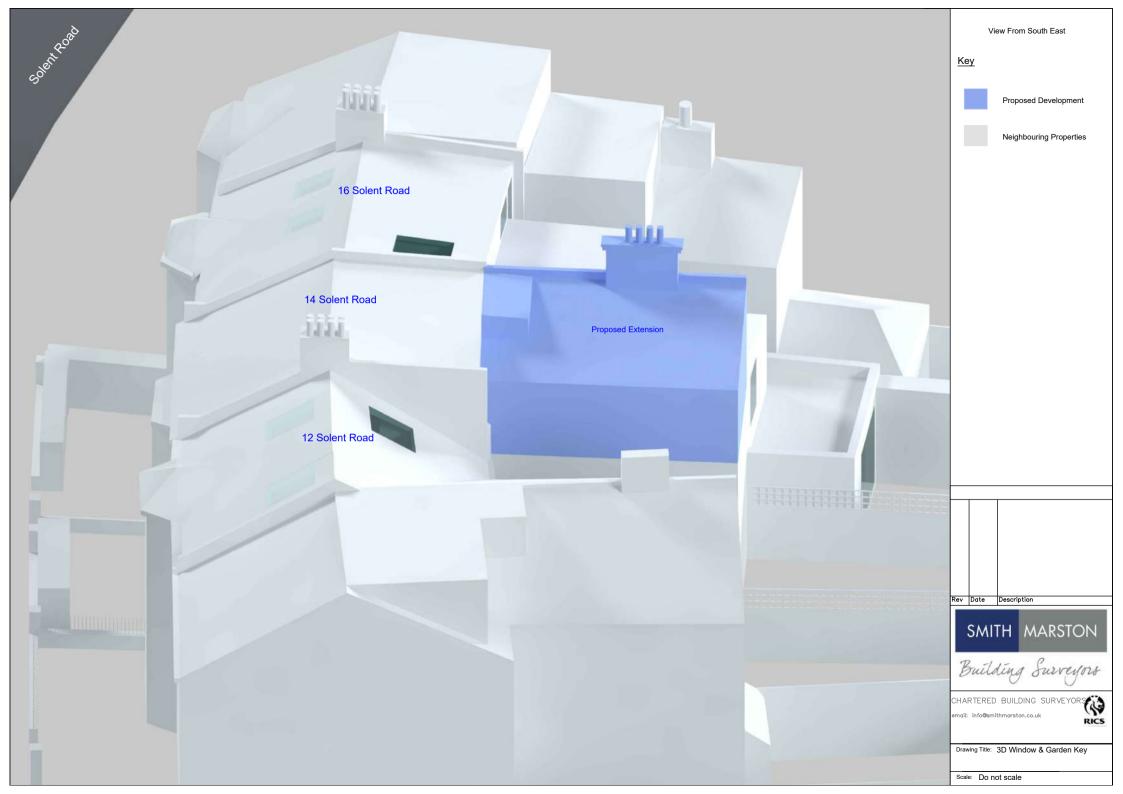
#### 5.1 General

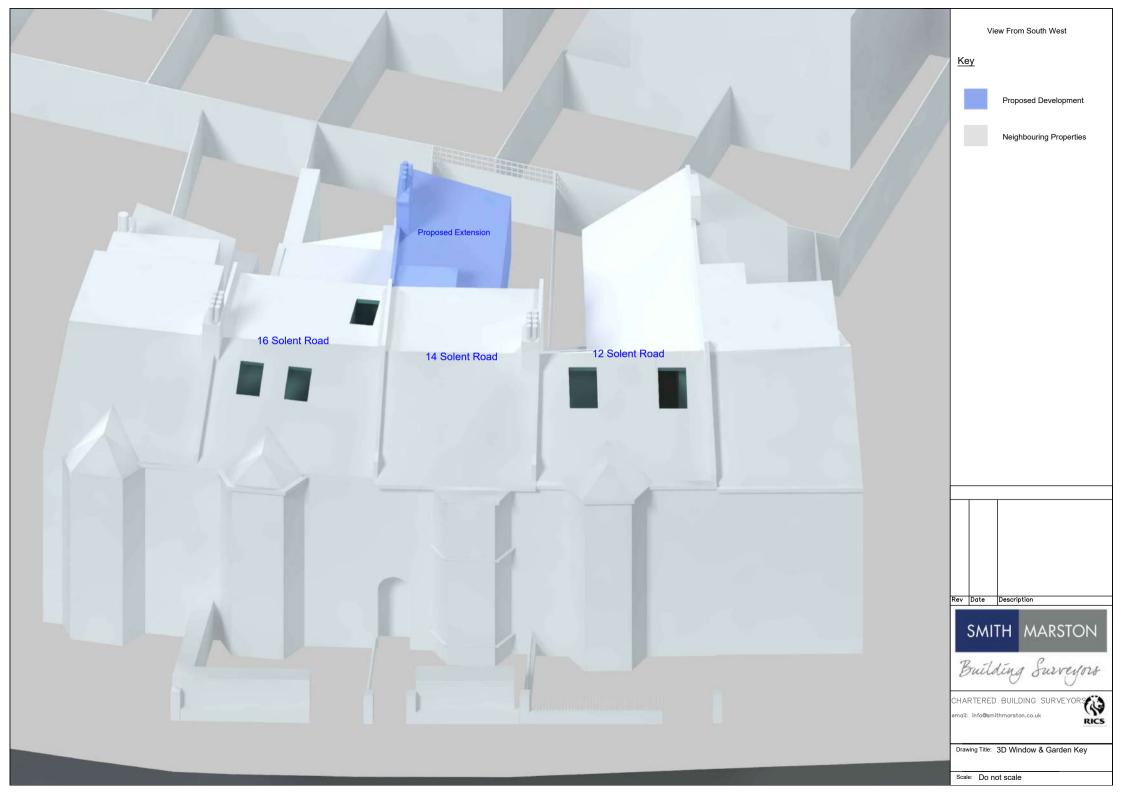
- 5.1.1 The report provided is solely for the use of the client and no liability to anyone else is accepted.
- 5.1.2 The assessment is limited to assessing daylight, sunlight and overshadowing to neighbouring windows, gardens and open spaces as set out in section 2.2, 3.2 and 3.3 of the BRE Guide.
- 5.1.3 The study is based on the information listed in section 2 of this report. The study has been undertaken without access to the proposed development site or neighbouring properties.
- 5.1.4 This assessment does not calculate the effects of trees and hedges on daylight, sunlight and overshadowing to gardens. The BRE guide states that it is usual to ignore the effect of existing trees.
- 5.1.5 We have undertaken the study following the guidelines of the RICS publication "Surveying Safely". Where limited access or information is available, assumptions will have been made which may affect the conclusions reached in this report. For example, where neighbouring room uses are not known, we will either make an assumption regarding the use, or take the prudent approach of treating the use of the room as being used for domestic purposes. Therefore, the report may need to be updated if room uses are confirmed by the local authority or by the consultation responses.
- 5.1.6 This report is based upon and subject to the scope of work set out in Smith Marston Building Surveyor's quotation and standard terms and conditions.

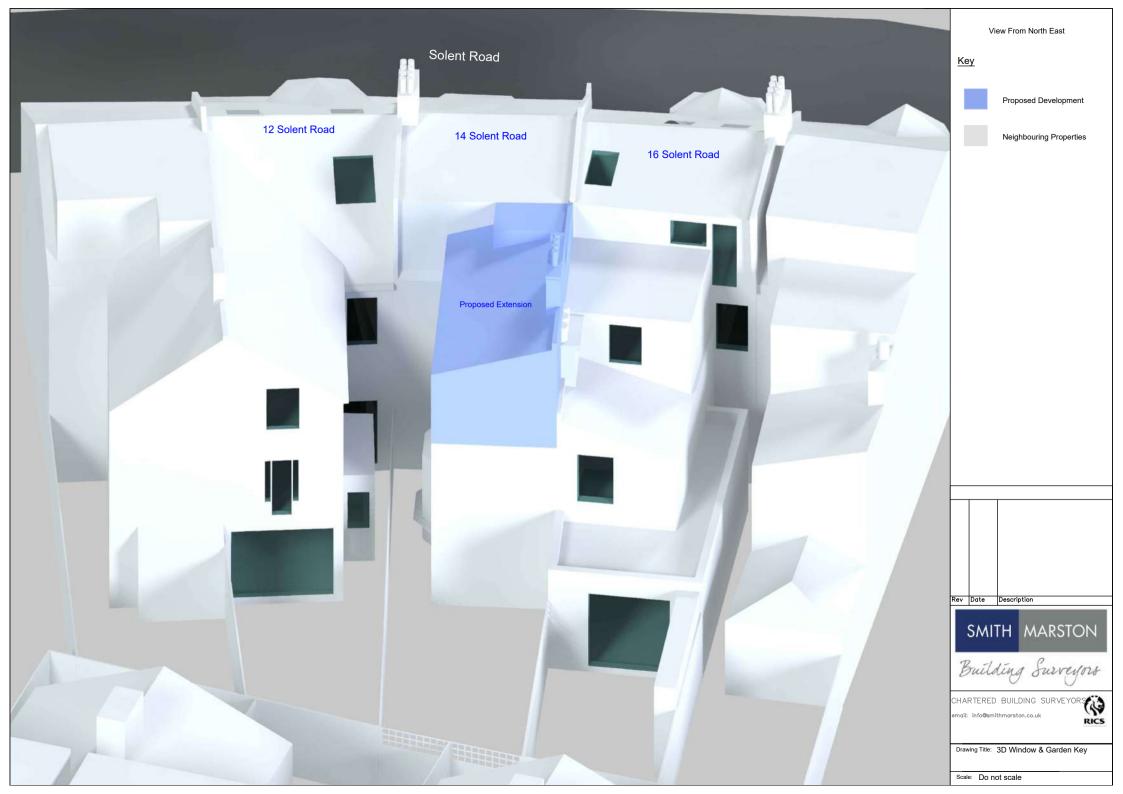


APPENDIX 1
WINDOW KEY & GARDEN KEY



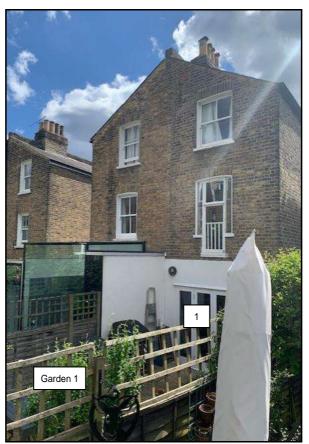




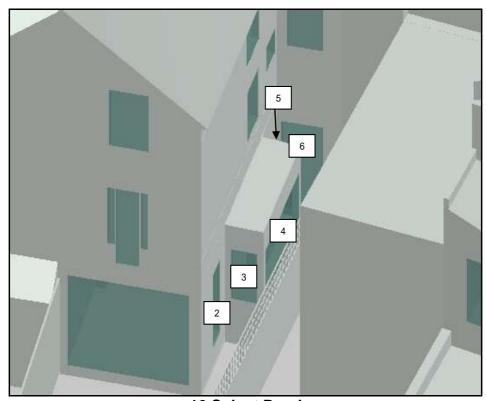




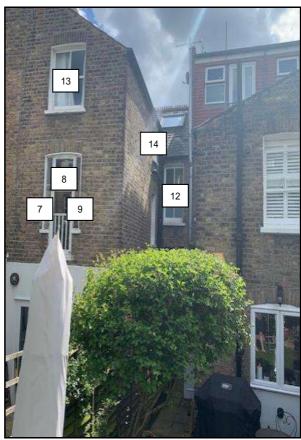
## **Neighbouring Windows**



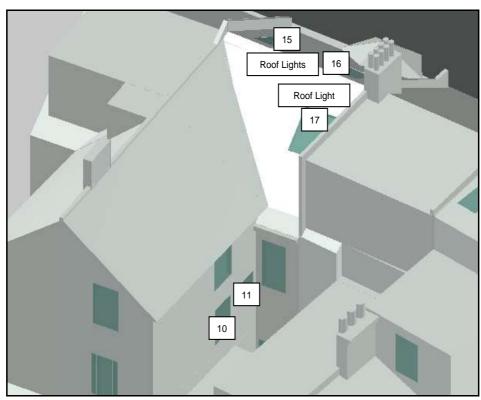
12 Solent Road



12 Solent Road



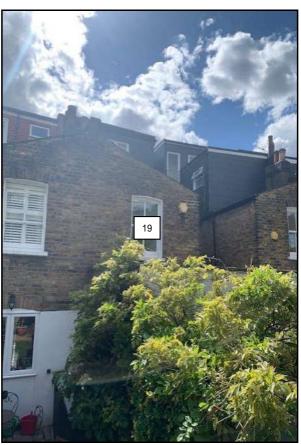
12 Solent Road



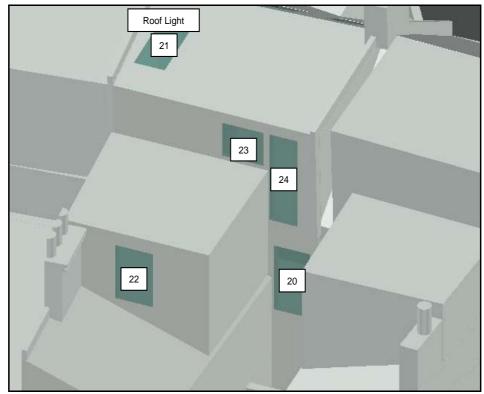
12 Solent Road



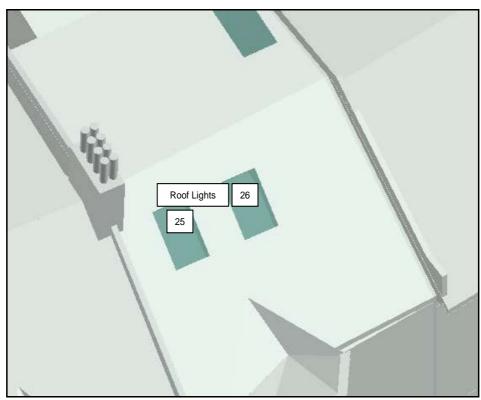
16 Solent Road



16 Solent Road



16 Solent Road



16 Solent Road

## APPENDIX 2 DAYLIGHT AND SUNLIGHT CALCULATIONS

### Appendix 2 - Vertical Sky Component 14 Solent Road, London, NW6 1TU

Reference	Room Use		Vertical Sky (	/ertical Sky Component		
		Before	After	Loss	Ratio	
12 Solent Road						
Ground Floor						
Window 1	Dining/Kitchen - main	29.5%	29.5%	0.0%	1.0	
Window 2	Dining/Kitchen - secondary	10.0%	8.2%	1.8%	0.82	
Window 3	Dining/Kitchen - secondary	14.6%	14.2%	0.4%	0.97	
Window 4	Dining/Kitchen - secondary	4.0%	2.2%	1.8%	0.55	
Window 5	Dining/Kitchen - secondary	0.6%	0.4%	0.2%	0.67	
Window 6	Reception	6.2%	4.3%	1.9%	0.69	
First Floor						
Window 7	Bedroom	35.5%	35.5%	0.0%	1.0	
Window 8	Bedroom	35.8%	35.7%	0.1%	1.0	
Window 9	Bedroom	35.5%	35.4%	0.1%	1.0	
Window 10	Bathroom/WC - n/a	17.5%	9.0%	8.5%	0.51	
Window 11	Bathroom/WC - n/a	14.8%	7.7%	7.1%	0.52	
Window 12	Bathroom/WC - n/a	21.1%	14.8%	6.3%	0.7	
Second Floor						
Window 13	Bedroom	37.6%	37.6%	0.0%	1.0	
Window 14	Bathroom/WC - n/a	25.1%	17.3%	7.8%	0.69	
Third Floor						
Window 15	Bedroom	87.4%	87.4%	0.0%	1.0	
Window 16	Bedroom	85.2%	85.2%	0.0%	1.0	
Window 17	Bedroom	73.3%	73.3%	0.0%	1.0	
16 Solent Road						
Ground Floor						
Window 18	Kitchen	25.2%	25.2%	0.0%	1.0	
First Floor						
Window 19	Bedroom	35.8%	35.8%	0.0%	1.0	
Window 20	Bedroom	14.4%	14.4%	0.0%	1.0	
Window 21	Landing - n/a	97.6%	97.6%	0.0%	1.0	
Second Floor						
Window 22	Bedroom	33.7%	29.2%	4.5%	0.87	
Window 23	Bedroom	38.8%	36.3%	2.5%	0.94	
Window 24	Bedroom	38.2%	36.4%	1.8%	0.95	
Window 25	Bedroom	83.2%	83.2%	0.0%	1.0	
Window 26	Bedroom	87.5%	87.5%	0.0%	1.0	

### Appendix 2 - Daylight Distribution 14 Solent Road, London, NW6 1TU

Reference	Room Use		Daylight Dis	stribution	
Reference	Nooiii Ose	Before	After	Loss	Ratio
12 Solent Road					
Ground Floor Windows 1 to 5	Dining/Kitchon	98%	98%	0.0%	1.0
Windows 1 to 5 Window 6	Dining/Kitchen Reception	96% 66%	90% 60%	6.0%	0.91
WITIGOW 6	Reception	00 /0	00 /6	0.0 /6	0.91
First Floor					
Windows 7 to 9	Bedroom	94%	94%	0.0%	1.0
Window 10	Bathroom/WC - n/a	98%	46%	52.0%	0.47
Window 11	Bathroom/WC - n/a	87%	52%	35.0%	0.6
Window 12	Bathroom/WC - n/a	95%	86%	9.0%	0.91
Second Floor	5 .	/	0=0/	0.00/	
Window 13	Bedroom	97%	97%	0.0%	1.0
Window 14	Bathroom/WC - n/a	76%	34%	42.0%	0.45
Third Floor					
Windows 15 to 17	Bedroom	100%	100%	0.0%	1.0
16 Solent Road					
Ground Floor					
Window 18	Kitchen	81%	81%	0.0%	1.0
First Floor					
Window 19	Bedroom	95%	95%	0.0%	1.0
Window 20	Bedroom	71%	71%	0.0%	1.0
Window 21	Landing - n/a	0.0%	0.0%	0.0%	1.0
Window 21	Staircase - n/a	0.0%	0.0%	0.0%	1.0
Second Floor					
Window 22	Bedroom	98%	94%	4.0%	0.96
Windows 23 to 26	Bedroom	92%	92%	0.0%	1.0
VIIIGOW3 20 to 20	Dodroom	JZ /0	JZ /0	0.070	1.0

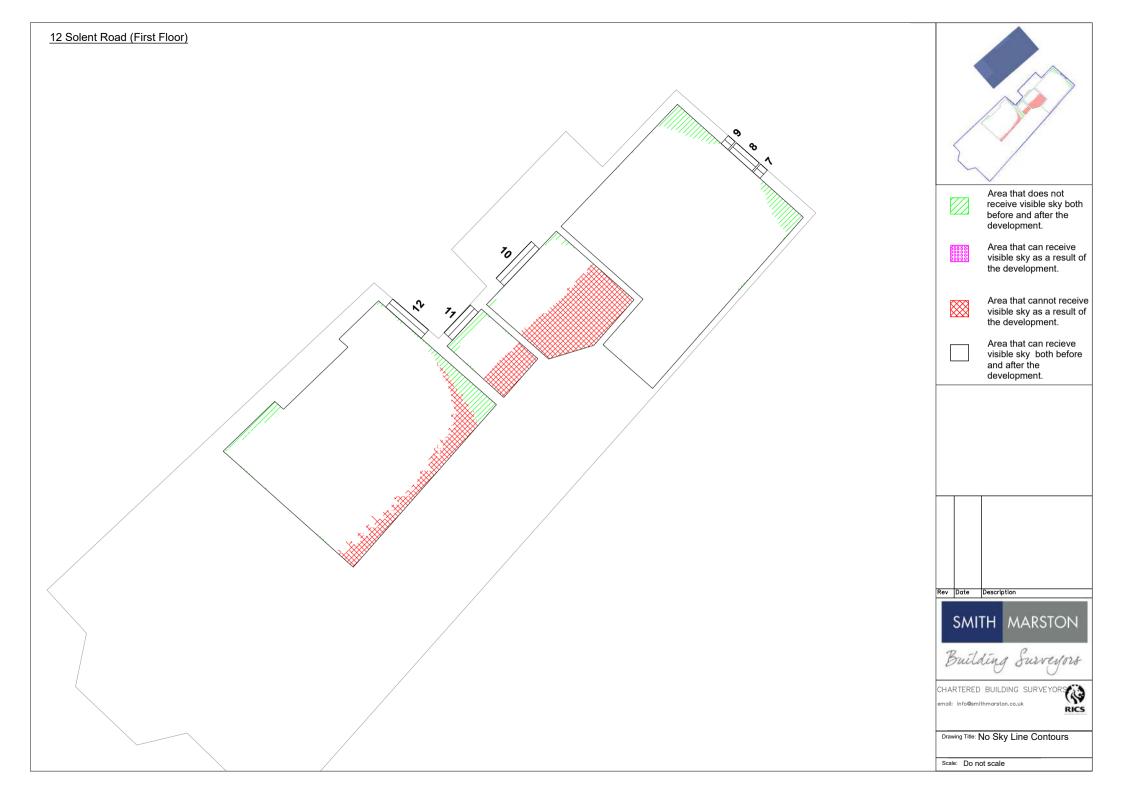
### Appendix 2 - Sunlight to Windows 14 Solent Road, London, NW6 1TU

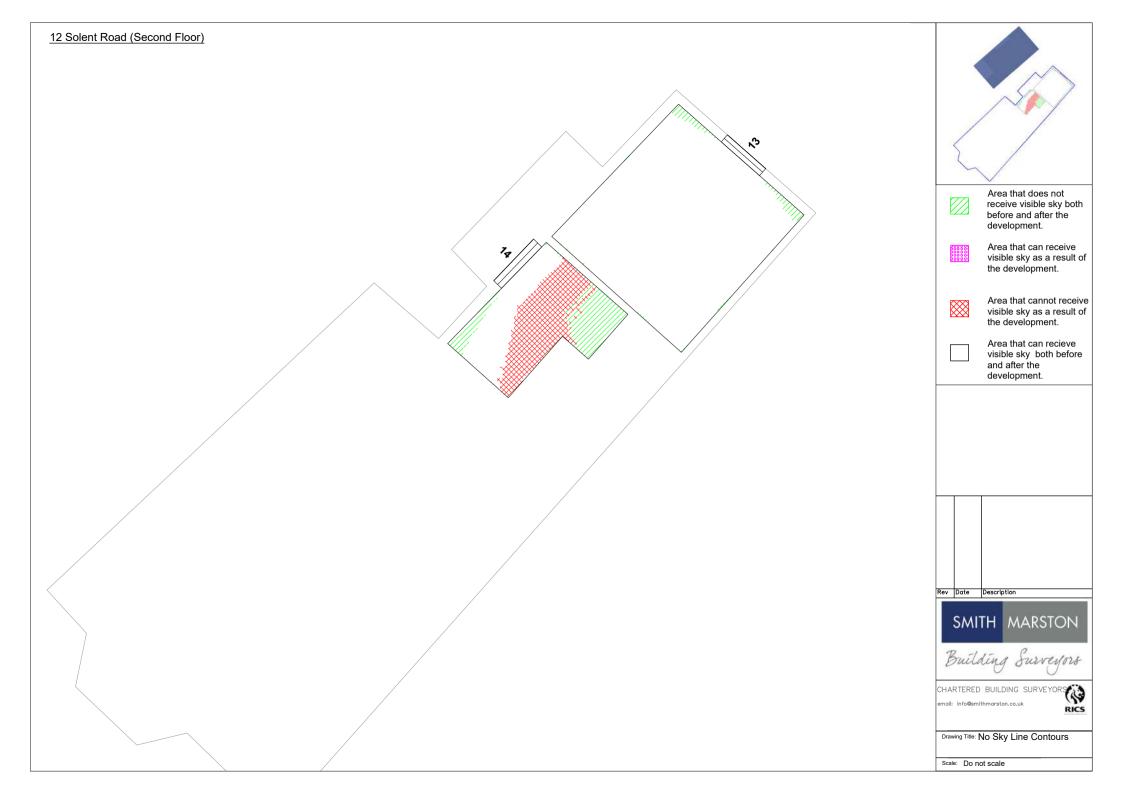
		Sunlight to Windows							
Reference	Room Use	T	otal Sur	ılight Ho	urs	Winter Sunlight Hours			ours
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
12 Solent Road									
Ground Floor									
Window 5	Dining/Kitchen	0%	0%	0%	1.0	0%	0%	0%	1.0
Third Floor									
Window 15	Bedroom	86%	86%	0%	1.0	27%	27%	0%	1.0
Window 16	Bedroom	93%	93%	0%	1.0	28%	28%	0%	1.0
16 Solent Road									
Second Floor									
Window 25	Bedroom	90%	90%	0%	1.0	27%	27%	0%	1.0
Window 26	Bedroom	90%	90%	0%	1.0	27%	27%	0%	1.0

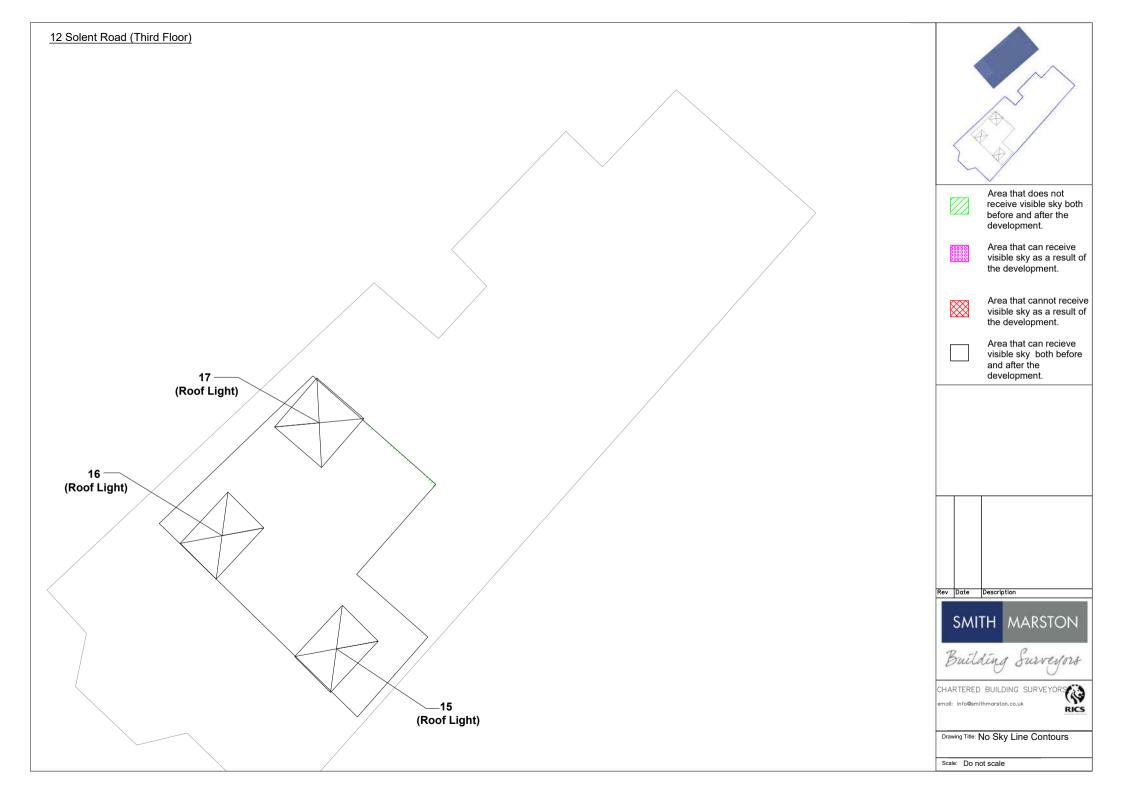
## Appendix 2 - Overshadowing to Gardens and Open Spaces 14 Solent Road, London, NW6 1TU

Reference	Total	Area		Area	a receivir	g at leas	st two h	ours of s	unlight c	n 21st N	/larch	
			ı	Before			After			Loss		Ratio
12 Solent Road												
Ground Floor Garden 1	35.48	m2	1.91	m2	5%	1.91	m2	5%	0.0	m2	0%	1.0
16 Solent Road												
Ground Floor Garden 2	24.73	m2	7.62	m2	31%	5.8	m2	23%	1.82	m2	8%	0.76







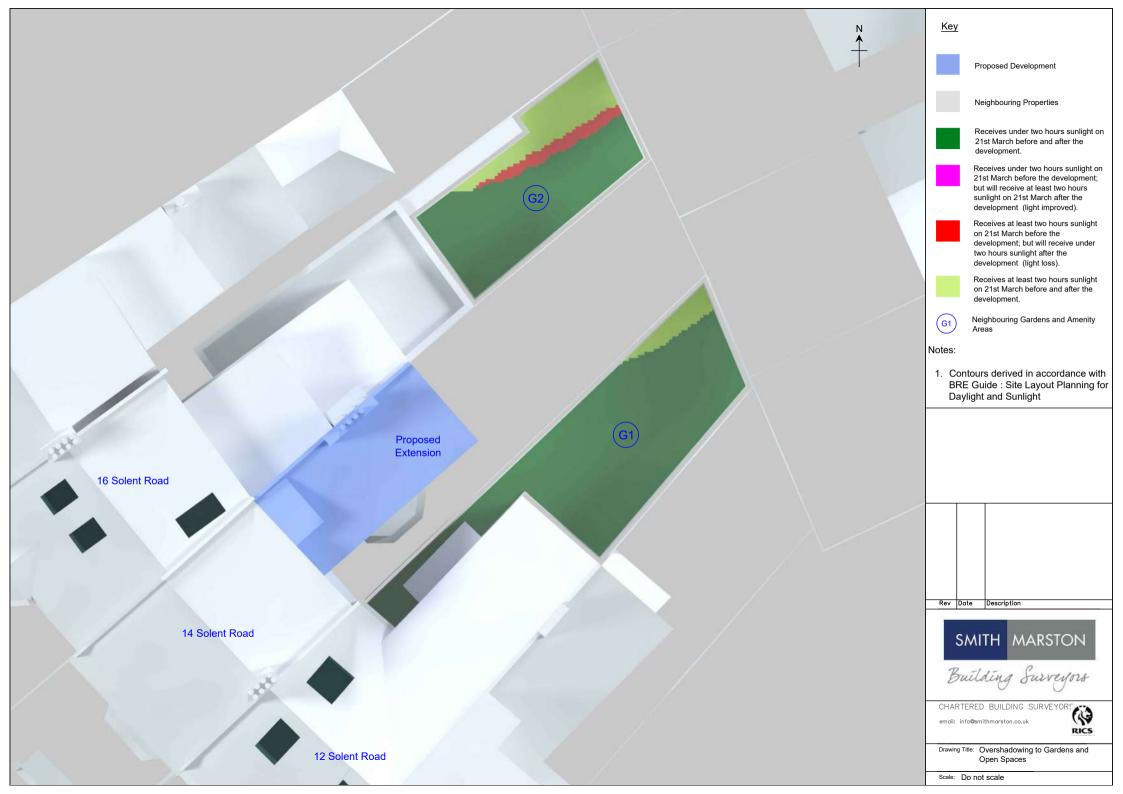








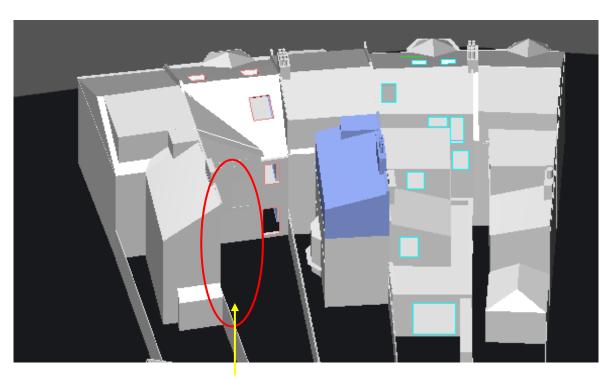
APPENDIX 3
OUTDOOR SPACES PLAN



APPENDIX 4
NO PROJECTING WING RESULTS

## Appendix 4 - Vertical Sky Component - Results if excluding Projecting Wings 14 Solent Road, London, NW6 1TU

Reference	Room Use	Vertical Sky Component					
		Before	After	Loss	Ratio		
12 Solent Road							
Ground Floor Window 6	Reception	16.9%	15.0%	1.9%	0.89		



light to window 6 improved if disregarding self-obstruction caused by projecting wing to Number 12